

IN THE CLAIMS

1. (Currently Amended) A method for a parent device to access a service of a child device in a driver stack, the method comprising:

creating a virtual device;
binding the virtual device to the parent device;
inserting the virtual device in the driver stack below the child device; and
accessing the service of the child device by the parent device with a request, the request appearing to come from the virtual device.

2. (Original) A method according to claim 1, wherein the driver stack is a dynamic driver stack.

3. (Canceled)

4. (Original) A method according to claim 2, wherein accessing the service of the child device includes incrementing a reference count of a number of users of the service of the child device.

5. (Original) A method according to claim 2, wherein binding the virtual device includes arranging the parent device to receive a query to remove the dynamic driver stack sent to the virtual device.

6. (Original) A method according to claim 2, the method further comprising:
receiving at the virtual device a query to remove the dynamic driver stack;
releasing the service of the child device; and
passing the query to remove the dynamic driver stack to a next device in the dynamic driver stack.

7. (Original) A method according to claim 6, wherein releasing the service of the child device includes releasing the service of the child device by the parent device.

8. (Original) A method according to claim 6, wherein releasing the service of the child device includes invoking a code within the virtual device that accesses the parent device.

9. (Original) A method according to claim 6, wherein releasing the service of the child device includes decrementing a reference count of a number of users of the service of the child device.

10. (Original) A method according to claim 2, wherein accessing the service of the child device includes accessing a second service of a second child device above the virtual device in the dynamic driver stack.

11. (Currently Amended) An article comprising:
a storage medium, said storage medium having stored thereon instructions, that, when executed by a computing device, result in:
creating a virtual device;
binding the virtual device to the parent device;
inserting the virtual device in a driver stack below the child device; and
accessing the service of the child device by the parent device with a request, the request appearing to come from the virtual device.

12. (Original) An article according to claim 11, wherein the driver stack is a dynamic driver stack.

13. (Canceled)

14. (Original) An article according to claim 12, wherein accessing the service of the child device includes incrementing a reference count of a number of users of the service of the child device.

15. (Original) An article according to claim 12, wherein binding the virtual device includes arranging the parent device to receive a query to remove the dynamic driver stack sent to the virtual device.

16. (Original) An article according to claim 12, the storage medium having stored thereon further instructions that, when executed by the computing device, result in:
receiving at the virtual device a query to remove the dynamic driver stack;

releasing the service of the child device; and
passing the query to remove the dynamic driver stack to a next device in the dynamic driver stack.

17. (Original) An article according to claim 16, wherein releasing the service of the child device includes releasing the service of the child device by the parent device.

18. (Original) An article according to claim 16, wherein releasing the service of the child device includes invoking a code within the virtual device that accesses the parent device.

19. (Original) An article according to claim 16, wherein releasing the service of the child device includes decrementing a reference count of a number of users of the service of the child device.

20. (Original) An article according to claim 12, wherein accessing the service of the child device includes accessing a second service of a second child device above the virtual device in the dynamic driver stack.

21. (Currently Amended) An apparatus supporting removal of a driver stack, the apparatus comprising:

a computer including a hardware component requiring the driver stack;
an operating system running on the computer;
the driver stack loaded onto the operating system and supporting the hardware component, the driver stack including at least a parent driver and a child driver, the child driver providing a service accessed by the parent driver; and
a virtual driver bound to the parent driver and installed below the child driver in the driver stack; and
a request from the parent driver to access the service provided by the child driver, the request appearing to come from the virtual device.

22. (Original) An apparatus according to claim 21, wherein the operating system is designed to support dynamic removal of the driver stack.

23. (Original) An apparatus according to claim 22, wherein the virtual driver is adapted to inform the parent driver when the driver stack is to be removed.

24. (Original) An apparatus according to claim 22, wherein the parent driver is adapted to insert the virtual driver into the driver stack before accessing the service provided by the child driver.

25. (Original) An apparatus according to claim 22, wherein the child driver includes a reference count of a number of users of the service.

26. (Previously Presented) An apparatus according to claim 25, wherein the parent driver is adapted to increment the reference count of the child driver before accessing the service provided by the child driver.

27. (Original) An apparatus according to claim 26, wherein the parent driver is adapted to decrement the reference count of the child driver after being informed by the virtual driver that the driver stack is to be removed and stopping use of the service provided by the child driver.
